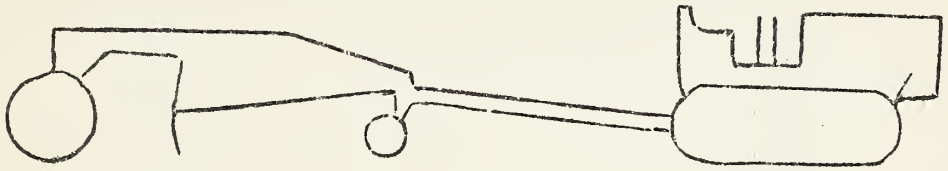
CONSTRUCTION



HINTS

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE

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SOIL STABILIZATION

The following is quoted from an article written by W. R. Collings and L. C. Stewart of the Dow Chemical Company, Midland, Michigan.

Two of the principal elements controlling the service properties of stabilized roads are: (1) the nature of the fine constituents and (2) their proportion to the coarse aggregate. A stable wearing course consists of a mixture of coarse aggregate, fine aggregate and binder soils, such as clay. Together, the fine aggregate and clay form a soil mortar in which the particles of coarse aggregate are securely embedded.

The constituents ordinarily found in road surfaces are classified as coarse material or gravel, coarse sand, fine sand, silt and clay. Gravel and sand are classified by sieve sizes, and silt and clay by particle diameter. Each of these constituents plays a part in contributing to the service properties of roads.

Soil mixtures having the most desirable properties are said to be stable. Soil stability is defined as resistance to lateral flow under load; actually it is a relative term. Sand or sandy gravels are unstable when dry, but are relatively stable when damp; clay and silt soils are unstable when wet, but are relatively stable when dry. Moisture content, therefore, is an important factor in controlling the degree of stability of soils. Small amounts of water apparently serve as an effective binding agent for soil grains, while excess quantities act as a lubricant. As road surfaces are alternately subjected to rains and to the heat of the sun, the most stable soil mixtures must be resistant to change in moisture content under varying weather conditions. Specifically, they must retain some moisture in dry weather, and they must not absorb too much water during periods of rainfall. The problem is to find combinations of materials that will yield the best all-weather stability.

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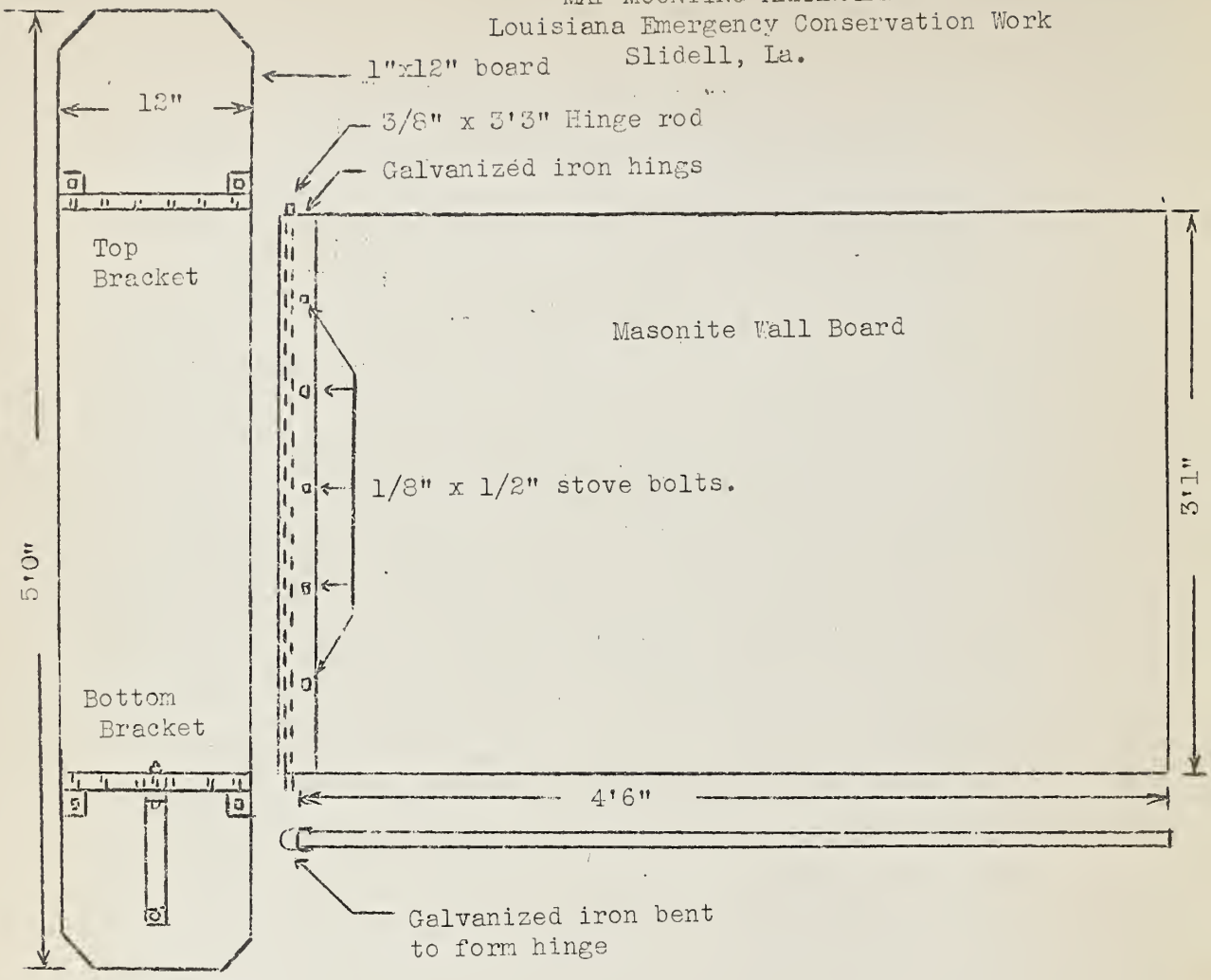
MAP MOUNTING ARRANGEMENT
Louisiana Emergency Conservation Work
Slidell, La.

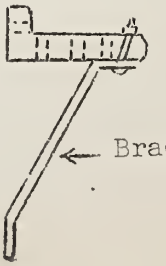


Mounting Board
showing brackets in place

Top view, top bracket

Top view, bottom bracket

Side view, top bracket



Side view, bottom bracket

The behavior of soil constituents can best be understood by studying the individual properties. The elementary or basic soil properties are:

Internal Friction, the resistance of soil grains to sliding over each other. It is indispensable in stable mixtures.

Cohesion, the resistance of soil grains to being separated.

Capillarity, the ability of a soil to transmit moisture in all directions regardless of gravity or other forces.

Compressibility, the ability of a soil to be compacted with loss of water or air from its pores.

Elasticity, the ability of a soil to be compacted without loss of water or air from its pores, and to rebound after the removal of the load.

H. L. Friend - EDITOR

Below is Region 5 Specification for Oil Line Hose for Hydraulic Trailbuilders.

Hose, Hydraulic, 3/4", outside diameter, 1-1/2"; in 50 ft. lengths, in accordance with the following specifications:

SPECIFICATIONS:

Variations in the outside diameter will be permitted only in so far as will permit the use of a field attachable coupling designed for a hose of the above outside diameter. The hose shall have a minimum bursting pressure of 2,000 pounds per square inch. It shall have at least two layers of wire braid reinforcing woven into the fabric of the hose. There shall be no reinforcing or other projections on the exterior surface, i.e., the exterior of the hose shall be smooth surface. The exterior surface of the hose shall be both abrasion and oil resisting; the interior surface shall be oil resisting.

Bidders shall submit a 6" sample of the hose with every bid.

Region 1 submits the following suggestion for Saw Units:

Old truck motors from trucks unserviceable for road service have been repaired and mounted either on a trailer or on another old truck which, though unserviceable for hauling, will give good service as a stationary unit, along with a 32-inch saw, to make up an efficient wood saw. The cost will average $100.00 for the saw unit without the mounting. Several of these have already been put into use and the saving over sawing by hand labor is appreciable.